

**BARRIERS, ATTITUDES, AND SELF-EFFICACY
OF PEOPLE WITH DISABILITIES IN
RECREATIONAL SPORTS ACTIVITIES
PARTICIPATION IN SAUDI ARABIA**

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RECREATIONAL SPORTS ACTIVITIES
PARTICIPATION IN SAUDI ARABIA**

by

ABDULELAH AHMAD SALAWI

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for the degree of Doctor of Philosophy**

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DEDICATION

I dedicate this humble work to the springs of loyalty, affection and virtue, my father and mother; and to my wife Oum Turki and my children (Turki, Abdullah and Ahmed) who spared no effort in helping me during my school years.

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TABLE OF CONTENTS

	Page
DEDICATION	
ACKNOWLEDGEMENT	ii
TABLE OF CONTENTS	iv
LIST OF TABLES	xi
LIST OF FIGURES	xiii
LIST OF ABBREVIATIONS	xiv
LIST OF APPENDICES	xv
ABSTRAK	xvi
ABSTRACT	xviii
CHAPTER ONE: INTRODUCTION	
1.1 Introduction	1
1.2 Problem Statement	3
1.3 Objectives of the Study	6
1.4 Research Questions	7
1.5 Research Hypotheses	7
1.5.1 Research Hypotheses One	7
1.5 .2 Research Hypotheses Two	8
1.6 Conceptual Framework	9
1.7 Significance of the Study	10
1.8 Limitations of the Study	10
1..9 Operational Definitions	11
1.9.1 Attitude	11
1.9.2 Self-Efficacy	12
1.9.3 Barriers to Participation	12
1.9.4 Age	13
1.9.5 Area	13
1.9.6 Level of Education	13
1.9.7 Participation	13
1.9.8 Disability	13
1.9.9 Disabled People	14

	Page
1.9.10 Hearing Impairment	14
1.9.11 Visual Impairment	14
1.9.12 Speech Impairment	15
1.9.13 Physical Disabilities (Mobility)	15
1.9.14 Leisure and Recreation Needs	15
1.10 Summary	15
 CHAPTER TWO: LITERATURE REVIEW	
2.1 Introduction	16
2.2 Theory of Planned Behavior	16
2.3 Reasons for Choosing TPB	19
2.4 Theory of Self-efficacy	21
2.5 Definition and Classification of Disability	24
2.6 Importance of Sport	25
2.7 Importance of Sport for People with Disabilities	27
2.8 Recreational Sports	30
2.9 Positive Effects of Participation in Recreational Sports	31
2.10 Factors Affecting Physical Activities in People with Disabilities	33
2.10.1 Age	33
2.10.2 Area	34
2.10.3 Education	35
2.10.4 Types of Disability	36
2.11 Attitudes	38
2.11.1 Definition of Attitudes	38
2.11.2 Attitude of People with Disabilities	40
2.12 Self-efficacy	41
2.13 Barriers to Participation	46
2.14 Summary	63
 CHAPTER THREE: RESEARCH METHODOLOGY	
3.1 Introduction	64
3.2 Research Variables	65

	Page
3.2.1 Independent Variables	65
3.2.2 Dependent Variables	66
3.2.3 Moderating Variables	66
3.3 Study Population and Sampling	67
3.3.1 Population of the Study	67
3.3.2 Sample of the Study	67
3.4 Procedures	68
3.4.1 Development of the Survey Questionnaire	68
3.4.2 Validity and reliability	70
3.4.3 Validity	70
3.4.3.1 Content Validity	70
3.4.3.2 Construct Validity	71
3.4.4 Translation and Back-translation of Self-Efficacy	73
3.4.4.1 Panel Experts (Content Validity) for Self-Efficacy	73
3.4.4.2 Reliability	74
3.5 Pilot study	75
3.6 Data Collection Procedure	77
3.7 Quantitative Data Procedure	77
3.8 Qualitative method	78
3.8.1 Interview Implementation and Data Analysis	78
3.8.2 Qualitative Data Analysis	81
3.9 Data analysis	81
3.9.1 Quantitative Data Analysis	82
3.9.2 Assessment of instrument	83
3.9.2.1 Validity of the instrument	83
3.9.2.2 Reliability of instruments	85
3.10 Data Preparation	86
3.10.1 Significance tests	86
3.10.2 Assumptions for logistic regression	87
3.10.2.1 Linearity	88
3.10.2.2 Independence of error	88
3.10.2.3 Multi-Collinearity	88

	Page
3.10.2.4 Test of significance	88
3.10.2.5 Direction of relationship	89
3.10.2.6 Moderating relationship	89
3.11 Summary	89
CHAPTER FOUR: RESULTS	
4.1 Introduction	91
4.2 Quantitative Data Analysis	92
4.2.1 Validity test	92
4.2.2 Reliability Test	95
4.3 Respondents Demography	95
4.4 Descriptive Analysis	96
4.4.1 Respondent's demographic characteristics and participation in sport and recreational activities	96
4.4.2 Barriers to participation in recreational sport activities	97
4.4.3 Attitude towards participation in recreational sport activities	99
4.4.4 Self-efficacy towards participation in recreational sport activities	100
4.5 Quantitative Results	101
4.5.1 Results related to the differences in barriers, attitude, and self-efficacy between participants and non-participants in recreational sports activities among people with disabilities.	102
4.5.2 Which variables predict participation?	104
4.5.3 Results related to moderators of independent variables	107
4.5.3.1 Age	108
4.5.3.1.1 Age and Barriers	108
4.5.3.1.2 Age and Attitude	108
4.5.3.2 Area	109
4.5.3.2.1 Area and Barriers	109
4.5.3.2.2 Area and Attitude	110
4.5.3.3 Level of Education	110
4.5.3.3.1 Level of Education and Barriers	110
4.5.3.3.2 Level of Education and Attitude	111
4.5.3.4 Type of Disability	112

	Page
4.5.3.4.1 Type of disability and Barriers	112
4.5.3.4.2 Type of disability and Attitude	112
4.6 Summary of Quantitative Analysis	114
4.7 Qualitative	115
4.7.1 Qualitative Results	115
4.7.1.1 Characteristics of Participants	115
4.7.2 Interviews with the disabled people	115
4.7.2.1 Awareness or recreational sports	115
4.7.2.2 The concept of recreational sports	116
4.7.2.3 The concept of Self-efficacy	117
4.7.2.4 Awareness of the existence of centers that provide recreational services	118
4.7.2.5 Practice of recreational sports activities	118
4.7.2.6 Barriers to the practice of recreational sports activities	118
4.7.2.6.1 Barriers associated with the administrative aspects	119
4.7.2.6.2 Constraints associated with the potentials available areas	120
4.7.2.6.3 Constraints associated with the facility provided by sports centres	120
4.7.2.6.4 Constraints related to transportation	121
4.7.2.6.5 Constraints related to available facilities	122
4.7.2.6.6 Constraints associated with recreational sports programs	123
4.7.2.6.7 Constraints associated with psychological aspects	123
4.7.2.6.7.1 Fear of injury	123
4.7.2.6.7.2 Inequality	124
4.7.2.6.8 Constraints associated with aspects of media	124
4.7.2.6.9 Constraints associated with social aspects	125
4.7.2.6.10 Family and friends	126
4.8 Summary of Qualitative Analysis	128

CHAPTER FIVE: DISCUSSION AND CONCLUSION	Page
5.1 Introduction	130
5.2 Discussion of Findings	130
5.2.1 Barriers to participation of people with disabilities in recreational sports activities.	130
5.2.2 Attitudes towards the participation of people with disabilities in recreational sports activities	132
5.2.3 Self-efficacy towards the participation of people with disabilities in recreational sports activities	133
5.3 Research Question 1: Are there any differences in the barriers faced by participants and non-participants in recreational sports?	134
5.4 Research Question 2: Are there any differences in the attitudes of participants and non-participants in recreational sports?	135
5.5 Research Question 3: Are there any differences between the self-efficacy of participants and that of non-participants in recreational sports?	137
5.6 Research Question 4: Which variables predict participation in recreational sports activities among people with disabilities?	138
5.6.1 Age as a predicting factor for the participation of people with disabilities in recreational sports activities	138
5.6.2 Type of disability as a predicting factor for the participation of people with disabilities in recreational sports activities	139
5.6.3 Level of education as a predicting factor for the participation of people with disabilities in recreational sports activities	140
5.6.4 Area as a predicting factor for the participation of people with disabilities in recreational sports activities	141
5.6.5 Self-efficacy as a predicting factor for the participation of people with disabilities in recreational sports activities	142
5.6.6 Barriers as predicting factors for the participation of people with disabilities in recreational sports activities	143
5.6.7 Attitude as predicting factors for the participation of people with disabilities in recreational sports activities	144

	Page	
5.7 Research Question 5: Do age, area, level of education, and types of disabilities have a significant moderating effect on the barriers, attitude, and self-efficacy involved in participation in recreational sports activities?	145	
5.8 Limitations and directions for future studies	152	
5.9 Recommendations	153	
5.10 Conclusion	154	
REFERENCES	156	
APPENDICES		
Appendix A	Approval letters	184
Appendix B	Survey Questionnaire English and Arabic	218
Appendix C	Survey Questionnaire English	226
Appendix D	Survey Questionnaire Arabic	232
Appendix E	Interview with people with disabilities	238

LIST OF TABLES

	Page
1.1 Distribution of Males in Saudi Arabia with Disabilities	3
1.2 Distribution of People with Disabilities According to Gender in Saudi Arabia	5
3.1 Research Variables	66
3.2 Population of People with Disabilities in the Kingdom Of Saudi Arabia According to Areas of the Research Population	67
3.3 Study Samples According to the Types of Disability and Areas of the KSA	68
3.4 Items Deleted from Factor Analysis	72
3.5 Cronbach alpha	86
4. 1 KMO and Bartlett's Test	92
4.2 Rotated Component Matrix	94
4.3 Reliability Statistics	95
4.4 Age and Type of People with Disability	96
4.5 Demographic Characteristics and Participation in Sport and Recreational Activities ($N = 504$)	97
4.6 Barriers to Participation in Recreational Sport Activities ($N = 504$)	98
4.7 Attitude towards Participation in Recreational Sport Activities ($N = 504$)	100
4.8 Self-efficacy towards Participation in Recreational Sport Activities ($N = 504$)	101
4.9 Results of t -test for Research Variables Based on Participants Groups	102
4.10 Categorical Variables Included in the Regression Model	105
4.11 Continuous Variables Included in the Regression Model	105
4.12 Results of Forward Stepwise Logistic Regression Predicting Participation in Recreational Sports Activities ($N = 504$)	107
4.13 Linear Regression Predicting the Age and Barrier Interaction towards Participation	108
4.14 Linear Regression Predicting the Age and Attitude Interaction towards Participation	109

	Page
4.15 Linear Regression Predicting the Barrier and Area Interaction towards Participation	109
4.16 Linear Regression Predicting the Attitude and Area Interaction towards Participation	110
4.17 Linear Regression Predicting the Barriers and Level of Education Interaction towards Participation	111
4.18 Linear Regression Predicting the Attitude and Level of Education Interaction towards Participation	111
4.19 Linear Regression Predicting the Barrier and Type of Disability Interaction towards Participation	112
4.20 Linear Regression Predicting the Attitude and Type of Disability Interaction towards Participation	113
4.21 Summarizing the Quantitative Results of this Study	114
4.22 Socio-Demographic Data of the Interviewees	115

LIST OF FIGURES

	Page
1.1 Conceptual framework	9
1.2 Theory of planned behaviour (Ajzen, 1991)	17
3.1 Study flowchart	64
3.2 Research design	65

LIST OF ABBREVIATIONS

ADA	Americans with Disabilities Act
DSD	Disabled People Deaf
DSB	Disabled People Blind
DSS	Disabled People Speech
DSM	Disabled People Mobility
EFA	Exploratory Factorial Analysis
KSA	Kingdom of Saudi Arabia
KMO	Kaiser-Meyer-Olkin's
ICF	International Classification of Functioning for Disability and Health
LTPA	Leisure-Time Physical Activity
SAR	Saudi Riyal
TPB	Theory of Planned Behaviors
TRA	Theory of Reasoned Action
US	United States of America
USM	Universiti Sains Malaysia
WHO	World Health Organization

LIST OF APPENDICES

	Page
A Approval letters	184
B Survey Questionnaire English and Arabic	218
C Survey Questionnaire English	226
D Survey Questionnaire Arabic	232
E Interview with people with disabilities	238

**HALANGAN, SIKAP, DAN EFIKASI KENDIRI ORANG
KURANG UPAYA DALAM PENYERTAAN AKTIVITI SUKAN
REKREASI DI ARAB SAUDI**

ABSTRAK

Penyertaan dalam aktiviti sukan rekreasi adalah penting sama ada orang itu berkeupayaan atau kurang upaya. Kajian ini menyiasat faktor-faktor yang meramalkan penyertaan orang kurang upaya dalam sukan rekreasi. Satu teknik persampelan rawak berstrata telah digunakan untuk mengumpul data daripada 504 responden di lima kawasan di Arab Saudi (KSA). Stratifikasi itu dilaksana berdasarkan empat jenis kurang upaya; pendengaran, penglihatan, gangguan pertuturan, dan gangguan mobiliti. Pendekatan penyelidikan kuantitatif telah digunakan diikuti dengan pendekatan penyelidikan kualitatif untuk meneroka lebih lanjut penemuan daripada analisis kuantitatif. Analisis keputusan dilakukan dengan menggunakan *ujian-t* untuk melihat perbezaan dalam halangan, sikap, dan efikasi sendiri orang kurang upaya, sama ada mengambil bahagian (peserta) atau tidak mengambil bahagian (bukan peserta) dalam sukan rekreasi. Regresi logistik telah dijalankan untuk menilai hubungan dan korelasi antara halangan, sikap, dan efikasi sendiri. Kemudian, regresi linear telah dijalankan untuk menentukan kesan moderator terhadap hubungan antara variabel bebas dengan bersandar. Data kualitatif termasuk temu bual dengan 30 orang responden digunakan untuk menyokong dan seterusnya menjelaskan keputusan kuantitatif. Keputusan menunjukkan perbezaan yang signifikan dalam halangan yang dihadapi oleh peserta dan bukan peserta. Bukan peserta menghadapi lebih banyak halangan daripada peserta yang mempunyai pengalaman dalam bidang sukan. Keputusan juga menunjukkan perbezaan yang signifikan dalam sikap peserta dan bukan peserta.

Orang kurang upaya yang mempunyai pengalaman dalam sukan rekreasi lebih cenderung untuk mengambil bahagian dalam aktiviti yang akan datang daripada mereka yang tidak mempunyai apa-apa pengalaman. Tiada perbezaan yang ketara wujud dalam efikasi sendiri peserta dan bukan peserta. Selain itu, sikap didapati dapat meramal penyertaan positif orang kurang upaya dalam sukan rekreasi. Hubungan ini dimoderasikan mengikut umur, kawasan, tahap pendidikan, dan jenis kekurangupayaan. Sebaliknya, halangan meramalkan penyertaan negatif dalam sukan rekreasi. Hubungan ini dimoderasikan oleh tahap pendidikan dan kawasan dan bukan mengikut umur atau kekurangupayaan. Efikasi sendiri tidak mempunyai hubungan yang signifikan dengan penyertaan dalam sukan rekreasi kerana penyertaan yang lemah dalam kalangan responden. Kajian ini menyimpulkan bahawa orang kurang upaya di KSA tidak mengambil bahagian dalam sukan rekreasi dan tidak biasa dengan program-program sukan dan aktiviti rekreasi. Kajian ini menekankan keperluan untuk memberi publisiti kepada sukan rekreasi dalam kalangan orang kurang upaya di KSA untuk mengatasi halangan yang mereka hadapi. Strategi utama termasuk mendidik dan menyediakan pentadbir liga, jurulatih, dan kemudahan yang sesuai, di samping membantu masyarakat menyediakan peluang-peluang baru untuk aktiviti sukan rekreasi. Keputusan kajian ini boleh membantu penyelidik masa depan dalam mereka bentuk model teori yang merangkumi faktor-faktor yang berbeza untuk meramal penyertaan dalam sukan rekreasi. Kajian masa depan juga perlu melibatkan wanita yang dijangka akan menghadapi halangan lebih daripada lelaki di KSA berdasarkan norma sosial dan budaya konservatif di negara ini. Lain-lain jenis kurang upaya, seperti gangguan mental atau psikologi dan epilepsi, juga perlu diberi perhatian dalam kajian akan datang.

**BARRIERS, ATTITUDES, AND SELF-EFFICACY OF PEOPLE
WITH DISABILITIES IN RECREATIONAL SPORTS
ACTIVITIES PARTICIPATION IN SAUDI ARABIA**

ABSTRACT

Participation in recreational sports is as important to disabled people as it is to people without disabilities. This study investigates factors that predict participation of people with disabilities in recreational sports. A stratified random sampling technique was used to collect data from 504 respondents in five areas of the Kingdom of Saudi Arabia (KSA). The stratification was applied based on four types of disabilities; hearing impairment, visual impairment, speech disorders, and mobility disorders. A quantitative research approach was used, followed by a qualitative research approach to further explore the findings. Data analysis was conducted using *t-test* to determine the differences in barriers, attitudes, and self-efficacy of people with disabilities who either participate (participants) or do not participate (non-participants) in recreational sports. Stepwise logistic regression was conducted to assess the association and correlation among these barriers, attitudes, and self-efficacy. Then, linear regression was conducted to determine the effect of moderators on the relationship between independent and dependent variables. Qualitative data included interviews with 30 respondents to support and further explain the quantitative results. Results indicated a significant difference in barriers faced by participants and non-participants. Non-participants faced more barriers than participants who have previous experience in sports. Results also revealed a significant difference in the attitudes of participants and non-participants. People with disabilities who had previous experience in recreational sports were more likely to participate in future activities than those who had no such previous experience. No

significant difference exists in self-efficacy of participants and non-participants. Moreover, attitude was found to positively predict the participation of people with disabilities in recreational sports. This relationship is moderated by age, area, level of education, and type of disability. By contrast, barriers negatively predict participation in recreational sports. This relationship is mediated only by level of education and area and not by age or type of disability. This study concludes that people with disabilities in the KSA do not participate in recreational sports and are unfamiliar with sports programs and recreational activities. This study emphasizes the urgent need to publicize recreational sports among people with disabilities in the KSA to overcome the substantial barriers they face. Key strategies include educating and preparing league administrators, coaches, and appropriate facilities, as well as helping communities provide new opportunities for recreational sport activities. Results of this study can assist future investigators in designing a theoretical model that encompasses different factors to predict participation in recreational sports. Future studies can also include female participants who are expected to face more barriers than males in the KSA given the conservative social and cultural norms of this country. Other types of disabilities, such as mental or psychological disorders and epilepsy, should also be given attention in future studies.

CHAPTER ONE

INTRODUCTION

1.1 Introduction

This chapter focuses on the barriers, attitudes, and self-efficacy of people with disabilities in the Kingdom of Saudi Arabia (KSA). Each of these three dimensions is investigated from a unique perspective. This chapter also introduces the four main research objectives of the study, as well as questions, hypotheses, theoretical framework, limitations, and definition of terms.

The number of people with special needs in the KSA has recently increased. People with disabilities constitute an important population segment that contributes equally to life in the modern world. They should be accorded the same rights as able-bodied people so they can live happily and without any discrimination from other social groups. A change in the perception of people with disabilities in the KSA can help significantly to develop the local Arab community and encourage people with disabilities to play a more active and productive role in society.

According to the statistics released by the World Health Organization (WHO, 2011), the number of people with disabilities is estimated at over a billion worldwide, and 110 million to 190 million people with disabilities face significant barriers in their daily lives.

As people with disabilities are considered as a significant group that can equally contribute to life in the modern world, they should have an equal chance to live a happy life without experiencing social discrimination (King et al., 2003).

People with disabilities suffer from a lack of physical, sensory, or mental deficiencies (Lui & Hui, 2009; Rimmer, Rubin, & Braddock, 2000). These deficiencies may be caused by an injury or genetic disease that leaves these individuals unable to undertake various activities in their daily lives, thereby generating the need to provide them with special care. A measure of the level of civilization is the way a society cares for individuals with disabilities (Wilson, 2002). The level of care provided to people with disabilities varies among communities and depends on the level of social, cultural, and economic development (McDougall et al., 2004).

At the international level, the social and emotional well-being of people with disabilities is promoted through participation in sports and provision of equipment and facilities that allow them to enjoy different kinds of sports and exercise. The Paralympics Games is one of the remarkable international events in which disabled people from 125 countries participate in special athletic contests (Special Olympics Healthy Athletes, 2005). However, the participation of people with disabilities in sports was found to be relatively low because of the level of their social integration (Law et al., 2006).

Physical inactivity has emerged as a common major health risk for people with disabilities, which can lead to other health problems, such as obesity and

cardiovascular diseases (Norman, Schmid, Sallis, Calfas, & Patrick, 2005; Rimmer, Rowland, & Yamaki, 2007).

Participation in sports and physical recreation can be the best way for people with disabilities to reduce their problems (Cortis, Sawrikar, & Muir, 2007; Law, Petrenchik, King, & Hurley, 2007). Similar to other groups in society, people with disabilities have the right to engage in all kinds of recreational activities within the limitations of their disabilities.

According to the KSA Ministry of Economy and Planning (2007), the number of people with disabilities in the country has increased to approximately 134,956. Of this total, 87,691 are males and 47,265 are females. Table 1 showed the distribution of people with disabilities in the KSA according to the number of males and the type of their disabilities.

Table 1.1

Distribution of Males in Saudi Arabia with Disabilities

Disability Type	Moving	Visual	Speech	Hearing	Mental	Psycho	Epilepsy	Multiple	Others	Total
Number of Disabled	29,408	6,072	4,440	4,464	1,8529	3,869	2,153	1,3942	5,214	87,691
Percentage	33.5	6.92	5.06	4.63	4.63	4.41	2.45	15.89	5.94	100

Source: (Ministry of Economy & Planning, 2007).

1.2 Problem Statement

A study on people with disabilities showed that, globally, the number of people with disabilities has increased alongside the general population growth (WHO, 2011). This large increase in the number of people with disabilities entails an increase in the

obstacles and problems faced by them, particularly in their participation in recreational sports (Murphy & Carbone, 2008).

Only few studies have been conducted on the participation of disabled people in sports and recreational activities. These studies focused mainly on only one or two kinds of disabilities (Felton, 2009, Moran & Block, 2010; Rimmer et al., 2000).

Studies showed that the negative attitude and lack of both interest and self-confidence of people with different levels of disability are the main factors that lead to their low participation rate in sports and recreational activities (Moran & Block, 2010; Rimmer et al., 2000). These studies also indicated that participation in physical activities for leisure has become an area of growing interest in recent years. Researchers have also begun to recognize the significance of participating in sports and physical activities for people with disabilities (Cunningham & Kwon, 2003; Nakazawa, Mahony, Funk, & Hirakawa, 1999; Trail, Anderson, & Fink, 2002).

According to the KSA Ministry of Economy and Planning, the number of people with disabilities in the country increased from 124,596 in 2004 to 134,956 in 2007 (Ministry of Economy & Planning, 2007; Ministry of Economy & Planning, 2004). Table 2 showed the distribution of people with disabilities in the KSA according to gender.

Table 1.2

Distribution of People with Disabilities According to Gender in Saudi Arabia

Year	Male	%	Female	%	Total
2004	80,567	64.66	44,029	35.33	124,596
2007	87,691	64.80	47,265	35.20	134,956

Source: (Ministry of Economy & Planning, 2007; Ministry of Economy & Planning, 2004)

The KSA is no different from other countries in the world with regard to identifying people with disabilities and solving their problems. It has focused on these people since the initiation of its social and economic development plans two decades ago (Ministry of Economy & Planning, 2004). The government has done its best to provide modern and appropriate means of welfare to help people with disabilities adapt in society. In the KSA, more than 498 centres exist, with specialized institutes for people with special needs. These centres are divided into 13 administrative regions throughout the country (Ministry of Economy & Planning, 2007).

Numerous recreational institutions are provided for people with disabilities in various areas in the KSA. However, the participation records in these places showed a lack of demand on the part of people with disabilities for the use of these facilities in general and a lack of participation in recreational sports in particular.

Moreover, a few studies conducted in the KSA on people with disabilities and the present status of sports for the disabled, such as those by Al-Mater, El-Najjer, and Al-Refae (1996), showed that only a limited number of tournaments were organized for handicapped people and only a small proportion of the disabled community participated in these tournaments. In addition, trainers and physical education

teachers were lacking. Most of the disabled were not given appropriate rehabilitation. Furthermore, a major drawback was the lack of equipment necessary for the disabled to participate in and benefit from sports and other activities (Al-Mater et al., 1996). However, these studies are obsolete and did not specifically look at recreational sports. Given the circumstances, we have to focus on people with disabilities so that we can identify their problems and formulate relevant preventive programs that can provide proper training, therapeutic care, rehabilitation, and necessary services in all fields pertaining to their disabilities.

Thus, the purpose of this study is both to explore the barriers faced by people with disabilities (i.e., people with hearing and visual impairment, and speech and mobility disorders) in the KSA and to evaluate their attitudes to and self-efficacy in participating in sports and recreational activities.

1.3 Objectives of the Study

For the purpose of the study, the specific research objectives are as follows:

1. To examine the barriers that hinder people with disabilities from participating in recreational sports in the KSA.
2. To examine the attitudes of people with disabilities in the KSA toward participating in recreational sports.
3. To examine the self-efficacy of people with disabilities in participating in recreational sports in the KSA.
4. To determine variables that predicts the participation of people with disabilities in recreational sports in the KSA.

5. To investigate the moderating effects of age, area, education, and types of disability on the participation of people with disabilities in recreational sports in the KSA.

1.4 Research Questions

The following research questions were addressed in this study:

1. Are there any differences in the barriers faced by participants and non-participants in recreational sports?
2. Are there any differences in the attitudes of participants and non-participants in recreational sports?
3. Are there any differences between the self-efficacy of participants and that of non-participants in recreational sports?
4. Which variables predict the participation of people with disabilities in recreational sports?
5. Do age, area, level of education, and types of disabilities have a significant moderating effect on the barriers, attitude, and self-efficacy involved in participation in recreational sports activities?

1.5 Research Hypotheses

The hypotheses of this study are listed below:

1.5.1 Research Hypothesis 1: There are no significant differences in barriers, attitude, and self-efficacy between participants and non-participants in recreational sports activities among people with disabilities.

H₀₁: There is no significant difference in barriers between participants and non-participants of recreational sports among people with disabilities.

H₀2: There is no significant difference in attitudes between participants and non-participants of recreational sports among people with disabilities.

H₀3: There is no significant difference in self-efficacy between participants and non-participants of recreational sports among people with disabilities.

1.5.2 Research Hypothesis 2: Age, area, level of education, and type of disability have no moderating effects on the barriers, attitudes, and self-efficacy of people with disabilities in participating in recreational sports.

H₀4: Age has no significant moderating effect on the barriers faced by people with disabilities in participating in recreational sports.

H₀5: Age has no significant moderating effect on the attitudes of people with disabilities in participating in recreational sports.

H₀6: Age has no significant moderating effect on the self-efficacy of people with disabilities in participating in recreational sports.

H₀7: Area has no significant moderating effect on the barriers faced by people with disabilities in participating in recreational sports.

H₀8: Area has no significant moderating effect on the attitudes of people with disabilities in participating in recreational sports.

H₀9: Area has no significant moderating effect on the self-efficacy of people with disabilities in participating in recreational sports.

H₀10: Level of education has no significant moderating effect on the barriers faced by people with disabilities in participating in recreational sports.

H₀11: Level of education has no significant moderating effect on the attitudes of people with disabilities in participating in recreational sports.

H₀12: Level of education has no significant moderating effect on the self-efficacy of people with disabilities in participating in recreational sports.

H₀13: Type of disability has no significant moderating effect on the barriers faced by people with disabilities in participating in recreational sports.

H₀14: Type of disability has no significant moderating effect on the attitudes of people with disabilities in participating in recreational sports.

H₀15: Type of disability has no significant moderating effect on the self-efficacy of people with disabilities in participating in recreational sports.

1.6 Conceptual Framework

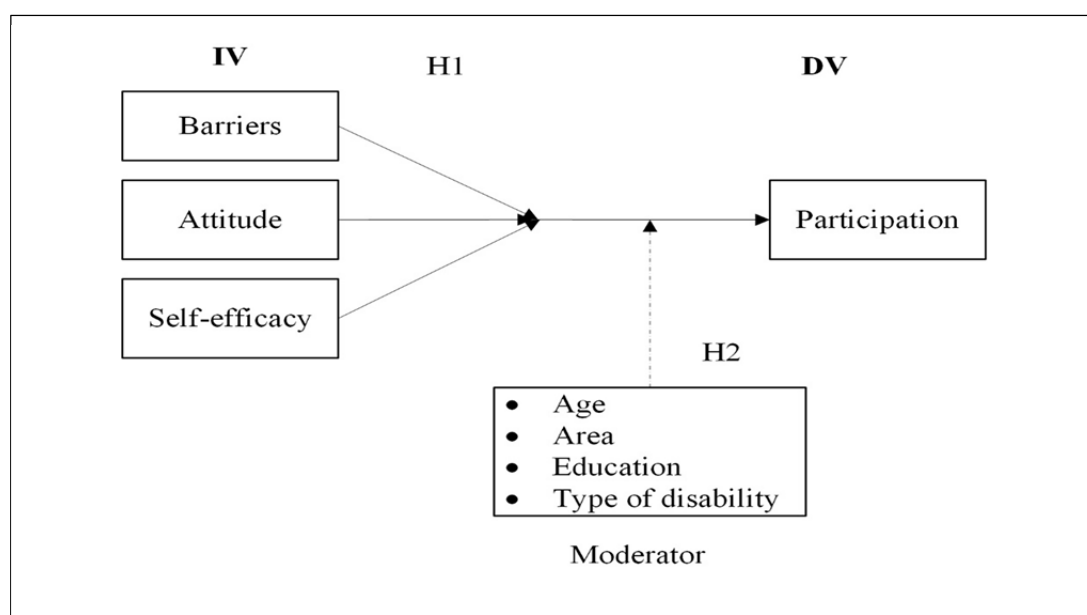


Figure 1.1 Conceptual framework

1.7 Significance of the Study

The significance of this study is as follows:

1. This study is the first of its kind in the KSA to identify the barriers and evaluate the attitude and self-efficacy of people with disabilities in participating in recreational sports.
2. Results of this study contribute to a better understanding of the barriers faced by people with disabilities in participating in recreational sports, with a view to making the appropriate changes that enhance the quality of life of these individuals.
3. Findings of this study can guide the relevant governmental authorities and agencies in formulating improvements to provide further suitable care for disabled people.
4. This study contributes to the current scientific knowledge and information in this field both in the KSA and on a global scale.

1.8 Limitations of the Study

Limitations are those conditions beyond the control of the researcher that may place restrictions on the conclusions of the study and their application to other situations.

The present study has certain limitations that need to be taken into account when considering the study and its contributions. Important limitations include:

1. Generalizations from the study should be limited to only the population described and cannot be applied to any other group.
2. For this research study, it was decided to choose only four types of disabilities: (a) mobility, (b) sight, (c) speech, and (d) hearing. It was decided to exclude other types of disabilities, such as mental, psycho, and epilepsy because

it is very difficult to get individuals with those disabilities involved as respondents due to their difficulties in understanding the data collection questionnaire. In addition, the age of the respondents is 10-40 years, because below 10 years and above 40 years cannot be allowed to participate in the study due to the restrictions.

3. This study only involved males with disabilities due to the cultural aspects in the KSA, which exclude females from participating in sports and recreation activities. In addition, no facilities have been allocated for females in disability centres and schools.

4. There is a limited body of research of literature focused on the KSA with regard to people with disabilities.

1.9 Operational Definitions

The terms and definitions, particularly the operational definition, used in this study are the following:

1.9.1 Attitude: Allport (1935) defines attitude as a neurophysiologic disposition, “a mental and neural state of readiness, organized through experience, exerting a directive or dynamic influence upon the individual’s response to all objects and situations with which it is related” (p. 810).

In this study, attitude is operationally defined as the feelings and beliefs that people with disabilities have in participating in recreational sports. Attitude was measured using 12 items developed and tested for reliability and validity. These items were worded as a series of statements and the respondents were required to

indicate their agreement or disagreement based on a five-point Likert scale (1= strongly agree, 2 = agree, 3 = neutral, 4 = disagree, and 5 = strongly disagree).

1.9.2 Self-Efficacy: According to Bandura (1994), self-efficacy is defined as an individual's beliefs in his or her ability to produce a designated level of performance that influences events that in turn affects his or her life. These beliefs about self-efficacy determine how the individual feels, thinks, behaves, and motivates him or herself. Such beliefs produce diverse effects through four major processes, which include cognitive, motivational, affective, and selection procedures. In this study, self-efficacy is operationally defined as the confidence of people with disabilities in performing and participating in recreational sports. Self-efficacy was measured using four items developed and tested for reliability and validity. These items were worded as a series of statements, and the respondents were required to indicate their agreement or disagreement based on a four-point Likert scale (1 = no, 2 = rarely, 3 = often, and 4 = always) (Harmon & Caldwell, 2001).

1.9.3 Barriers to Participation: Barriers are often referred to as “constraints” in the literature on leisure. Constraints are obstacles that interfere with the ability of an adolescent to participate in the desired leisure and recreation activities (Searle & Jackson, 1985). In this study, barriers are operationally defined as the obstacles that prevent people with disabilities from participating in recreational sports. These obstacles were measured through an examination of the barriers related to each sub-construct: administrative issues, existing facilities and equipment, recreational sports activity programs, and media coverage. Barriers were measured using 12 items developed and tested for reliability and validity. These items were worded as a series

of statements, and the respondents were required to indicate their agreement or disagreement based on a five-point Likert scale (5 = strongly agree, 4 = agree, 3 = neutral, 2 = disagree, and 1= strongly disagree).

1.9.4 Age: The participants in this study had an age between 10 and 40 years old.

1.9.5 Area: The cities involved in this study were those with a high incidence of disabilities: Riyadh, Makkah, Eastern Province, Jazan, and Aljouf.

1.9.6 Level of Education: Educational level was categorized into “illiterate,” “primary,” “intermediate,” “secondary,” and “undergraduate and postgraduate.”

1.9.7 Participation: Participation refers to the involvement of “people who are really interested and who attended the activities,” whereas non-participation refers to “people who are not interested and did not react to the activities.”

1.9.8 Disability: The WHO (1980) defines disability as any constraint or lack resulting from a deficiency in the ability to perform an activity in the manner or within the range considered for normal people. A deficiency is any loss of or abnormality in physiological, psychological, and anatomical structures or functions. For a given person, a handicap is a disadvantage resulting from an impairment or disability that prevents the fulfilment of a role considered normal (depending on age, sex, and social and cultural factors) for a particular individual.

1.9.9 Disabled People: A disabled person is one who has impaired mental or physical functions that limit his or her participation in daily life activities. In the KSA, people with disabilities are classified according to the type of disability they have, namely, hearing and auditory disabilities, visual disabilities, mental disabilities, physical disabilities, and various types of chronic disease (Al-Mater et al., 1996). This study employs only four categories, which include impairments in mobility, sight, speech, and hearing.

1.9.10 Hearing Impairment: The WHO (1991) defines a “disabling” hearing impairment as a permanent unaided hearing threshold of 31 dB or greater for the better ear. The definition also acknowledges that hearing impairment affects the ability of an individual to connect to other people and to the world at large. Furthermore, the reliance of the impaired on alternative forms of communication partly captures the experience of a hearing disability.

1.9.11 Visual Impairment: According to Jacko and Vitense (2001), “There are both legal and education definitions of visual impairment. The legal definition of blindness relies on measurements of visual acuity, which is the ability to clearly distinguish forms or discriminate details at a specified distance. Visual acuity is usually measured through the reading of letters, numbers, or other symbols from a chart 20 feet away. The familiar phrase ‘20/20 vision’ does not, as some people think, mean “perfect vision.” It simply indicates that, at a distance of 20 feet, the eye can see what an eye with a normal sight should be able to see.”

1.9.12 Speech Impairment: Speech impairment is defined as a communication disorder, such as stuttering, impaired articulation, oral motor disorders, language impairment, or voice impairment that adversely affects the performance of the disabled person (Beitchman, Nair, Clegg, & Patel, 1986).

1.9.13 Physical Disabilities (Mobility): Mann and Lane (1995) define disability as an inability to or limitation in performing tasks, activities, and roles at levels expected within a given physical and social context. Thus, physical disabilities include weakness, paralysis, tremors, amputations, contractures, spasticity, and other limitations related to coordinated movement.

1.9.14 Leisure and Recreation Needs: The term leisure and recreation needs refer to the free time during which desired activities can be done, but in which individuals cannot participate because of numerous obstacles (Jackson & Blakely, 1993).

1.10 Summary

This chapter introduced the effect of barriers, attitudes, and self-efficacy of disabled people on their participation in recreational sports. It also discussed the problem statement, purpose, objectives, and research questions of the study. The framework was outlined to present two main hypotheses with 15 sub-hypotheses. This chapter also articulated the significance of the study and its operational definitions.

CHAPTER TWO

LITERATURE REVIEW

2.1 Introduction

This chapter reviews the literature relevant to the study. The research framework, pertinent theories on each of the aforementioned variables, and previous studies on their interrelationships are discussed. The opportunities of people with disabilities to engage in physical activities and how these opportunities increase the quality and quantity of their exercise are also discussed.

2.2 Theory of Planned Behaviour

This study uses the theory of planned behaviour (TPB) to predict and understand the barriers that hinder people with disabilities from participating in recreational sports in the KSA. The TPB consists of three measurable constructs: (a) attitude towards behaviour, (b) subjective norms, and (c) perceived behavioural control that predicts the intention to perform certain behaviour. In TPB, intention is considered as the key factor that leads to a certain behaviour and refers to a person's decision to or effort in performing that behaviour based on the attitudes, subjective norms, and perceived behavioural control (Ajzen, 1991). Figure 1.2 illustrates the TPB. In other words, no behaviour occurs without a motivating intention behind it. Nevertheless, intention should be supported by other factors, such as environmental and personal facilitators, barriers, self-efficacy, and the health condition of the individual, to actually trigger participation (Kinne, Patrick, & Maher, 1999; Rimmer, Riley, Wang, Rauworth, & Jurkowski, 2004).

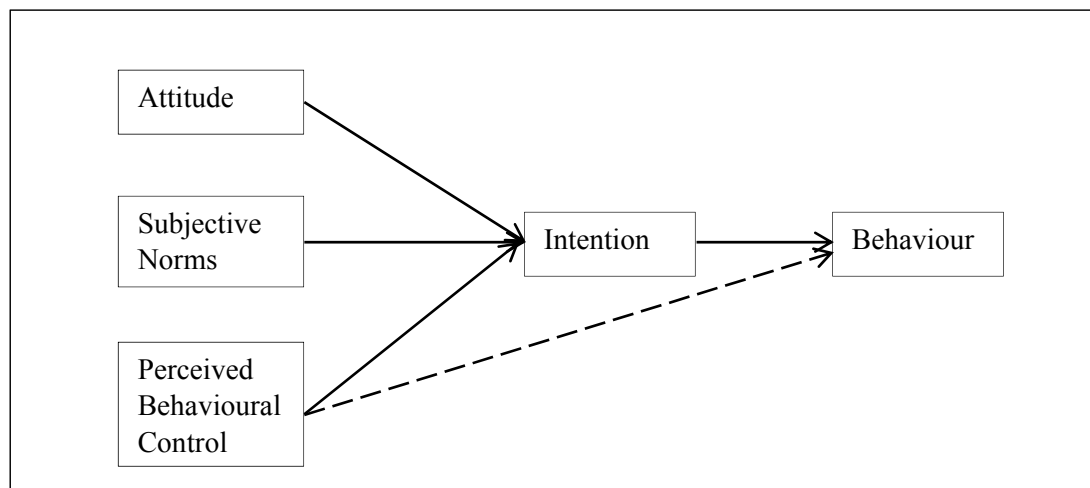


Figure 1.2 Theory of planned behaviour (Ajzen, 1991).

Furthermore, de Vries, Dijkstra, and Kuhlman (1988) claim that attitude to physical activities refers to an individual's set of thoughts, beliefs, and feelings about physical activities. Attitude determines the behavioural intention based on the individual's evaluation of behaviour whether the outcome is negative or positive. The attitudes of an individual to a given behaviour are associated with beliefs, intentions, subjective norms, and perceived behavioural controls that affect his or her behavioural intention (Ajzen, 1991).

The preceding discussion showed that intention and attitude are two key elements in participation in sports. However, these two elements are not the only factors that affect behaviour, particularly in the case of people with disabilities. For people with disabilities, health condition and injury are the most significant determinants of participation in physical activity (Finch, Lawton, Williams, & Sloper, 2001). Apart from the intention to engage in physical activity, other factors must be considered, such as attitude, self-efficacy, personal facilitators, and other

personal barriers, including income, energy, motivation, skills, time, gender, and age (Humpel, Owen, & Leslie, 2002).

Furthermore, a significant relationship exists between the sustained pursuit of exercise with motivational barriers and self-efficacy, but no significant relationship exists between environment and disability (Kinne et al., 1999). In other words, environmental factors and disability do not stop people from being motivated and feeling good in relation to sports and recreational activities.

Social factors partly determined an individual's participation in physical activities. Social factors constitute the second component of TPB and refer to what other people think of physical activities and the subjective norms governing the behaviour of an individual (Ajzen, 1991). Accordingly, subjective norms affect behavioural intention, which is facilitated by the effect of social pressure as apprehended by an individual depending on normative beliefs about whether or not to perform a given behaviour. In other words, compliance with the performance of the given behaviour depends on motivational judgment, which is based on perceived norms.

The third construct of TPB is perceived behavioural control, or an individual's perception of how controllable his or her behaviour is. Behavioural control affects behaviour directly when the behaviour is within one's control, and indirectly when it is not within one's control in accordance with the behavioural intention (Ajzen, 1991).

Generally, TPB holds that the participation of disabled people in sports is affected by their intentional liking for the activity (attitude), their perception of what others in their social context think of their participation (subjective norms), and their own perception of how they can manage the activity (perceived behavioural control).

2.3 Reasons for Choosing TPB

The theory of planned behaviour is an extension of the theory of reasoned action (TRA). The behavioural intention of a person cannot be the sole determinant of certain behaviour if an individual's control over the behaviour is incomplete (Bandura, 1997). Thus, the concept of behavioural control is incorporated in TPB to explain the association between the behavioural intention and the actual behaviour. Several findings suggest that, compared with TRA, TPB has a better predictive ability in health-related behavioural intention (Ajzen, 1989), particularly in the related fields of leisure, exercise, diet, and so on. Nevertheless, both TPB and TRA can explain the social behaviour of an individual by considering the social norm as a significant variable in studying the participation of disabled people in sports.

The theory of planned behaviour holds that a certain behaviour can be predicted through the individual's intention to perform that behaviour, which in turn is determined by three cognitive factors: (a) attitude (the cognitive affective evaluation of that behaviour), (b) subjective norm (approval of that behaviour by significant others), and (c) perceived behavioural control (perceived competence to perform that behaviour) (Montano & Kasprzyk, 2008).

The theory of planned behaviour has been used to explain disabled people's lack of positive attitude towards participation in recreational sports, their perceived low benefits of physical activities, and the influence of their perceived approval from significant others based on a subjective norm (Van der Ploeg, Van der Beek, Van der Woude, & Van Mechelen, 2004).

Therefore, the TPB can be used to explain the non-participation of people with disabilities in sports and to gain insights into the intervention methods that promote their participation in sports to improve their general health. This theory has gained popularity among researchers and practitioners in the fields of education, economics, health, sociology, information technology, and others. The integrative content of the theory includes social learning theory, which was proposed by Bandura (1997).

Generally, TPB constructs of attitude and self-efficacy can be measured through a Likert scale by using simple phrases or terms such as like/dislike, good/bad, and agree/disagree (Ajzen, 1991). By contrast, the intention to perform a certain behaviour depends on the measurement of attitudes and subjective norms (Ajzen & Madden, 1986). Theory of planned behaviour is generally used to predict and understand healthy and unhealthy behaviour and the results of a particular behaviour (Ajzen & Madden, 1986; Gantt, 2001).

Thus far, no known studies have been conducted in the KSA using TPB, with its constructs of intention, attitude, and self-efficacy, to determine the factors that

contribute to the lack of participation in recreational sports of people with disabilities and to the formulation of an intervention that can encourage such participation.

2.4 Theory of Self-efficacy

The theory of planned behaviour maintains that the behaviour of an individual can be planned and affected by attitude, subjective norms, and perceived behavioural control. However, these three elements are strongly related to the self-perception of an individual, particularly to how well the individual thinks he or she will fare in the activity (self-efficacy). Thus, the theory of self-efficacy is also used in this study to further explain the behaviour of disabled people. In this study, self-efficacy refers to the confidence of an individual in his or her participation despite the influence of certain barriers (de Vries et al., 1988).

The term self-efficacy was coined by Bandura (1997) to refer to the process of explaining behavioural change. A given behaviour in physical activities can be explained further by an individual's belief in his or her own ability to initiate an activity, participate, and sustain that participation in a programmed exercise, such as performing at a certain level, winning a game, or attempting difficult skills or actions. Another definition of self-efficacy is the conviction that one can successfully execute a course of action to produce certain behaviour (McAuley & Courneya, 1993). In other words, self-efficacy represents the self-confidence of an individual in a specific situation.

Bandura (1986) developed the theory of self-efficacy to examine the cognitive reasons behind the behaviour of an individual. Therefore, in the case of

people with disabilities, self-efficacy can be assumed to be less adequate because of their physical deformities or decreased abilities. In this context, the concept is frequently applied to determine the behaviour of people with disabilities in the sense of control over their own behaviour and the environment. Self-efficacy influences the behavioural goals that people choose and the way they overcome obstacles as they strive to achieve these goals. In its most general form, self-efficacy predicts the participation of disabled people in sports.

Resistance self-efficacy is defined as the belief that one has the ability to resist participation in sports because of deformities (Bandura, 1997). Self-efficacy concerning the interest resistance of disabled people has been found to predict the status of people with special cases. If self-efficacy is related to encouraging the participation of disabled people in sports, other cognitive factors, such as low self-esteem, are associated with their non-participation in sports.

Hagger, Chatzisarantis, and Biddle (2002) found moderate correlations between self-efficacy and the participation of young and old people in physical activities. Similarly, Yordy and Lent (1993) and Armitage and Conner (1999) demonstrated that self-efficacy was a significant predictor of physical activity (Armitage & Conner, 1999; Yordy & Lent, 1993). Indeed, self-efficacy is one of the internal constituents strongly related to a person's participation (Allison & Keller, 2004). Basically, self-efficacy is described as the confidence in one's ability to produce something (Bandura, 1997; Zimmerman, Bandura, & Martinez-Pons, 1992). The theory advocates that self-efficacy levels have an effect on behavioural choices, performance, and persistence. Betz & Hackett (1999) and Sherer et al. (1982) argued

that self-efficacy expectancies are the main influential determinants of behavioural change because such expectancies influence the initial decision to perform a certain behaviour, including the effort spent and persistence in that behaviour in the face of adversity.

Self-efficacy is typically measured by three levels of specificity: (a) global efficacy, (b) domain-specific efficacy, and (c) task-specific efficacy (Bandura, 1997). Based on previous research, the best evaluation of behaviour can be achieved when the level of specificity used in measuring efficacy is coordinated with the level of behaviour that it is likely to predict. The social cognitive theory (Bandura, 1997) is one of the major theories used in explaining the behaviour of individuals in relation to exercise. According to this theory, behaviour, environment, and personal factors appear to be related to one another (Buckworth, 2000).

However, the most important variable in this theory is self-efficacy. The self-assurance of an individual in his or her ability to master a skill has an effect on both the adoption of and persistence in certain behaviours. It is also directly related to the choice of behaviour and the environment in which that behaviour is displayed.

As soon as the behaviour is initiated, the level of self-efficacy may affect the duration of and the commitment to the behaviour. Thus, the higher a person's level of self-efficacy is, the greater the possibility that he or she will persist when faced with obstacles and negative effects at some point in the behaviour. Bandura (1997) suggested that the level of self-efficacy is affected by four key sources: (a)

performance accomplishments, (b) vicarious experience, (c) verbal persuasion, and (d) emotional arousal.

Performance accomplishments refer to the personal mastery and positive knowledge that come into play in the performance of a given behaviour (Schunk, 1989). It is believed to be the major component of self-efficacy. In this sense, the continuous achievements produced by a given behaviour imminently increase the level of self-efficacy, whereas continuous failures reduce it. Positive performance actions are perceptually essential in the course of adopting a certain behaviour because occasional failures are expected to be less detrimental when the level of self-efficacy is already high (Crandall & Slivken, 1980).

The concept of self-efficacy is used as a perceived behavioural control (Ajzen, 2002). It influences one's perception of the ease or difficulty of a particular behaviour. It is also linked to controlled beliefs, which refer to beliefs in the existence of factors that may facilitate or hamper the performance of the behaviour. The measurement of this quality is usually conducted through items with statements such as "I am sure I can participate in recreational activities." When people with disabilities are affected by the social environment and are perceived as capable of performing well in sports and other recreational activities, they are likely to participate in such activities.

2.5 Definition and Classification of Disability

Akabas and Gates (2002) described disability as a social concept and defined it as the loss of the ability to execute socially accepted tasks and fulfil roles because of a